

3430 Evaluation

October 31, 1979

Biological Evaluation of Root Disease in the Summerhome  
Tract on the Zigzag Ranger District

Forest Supervisor, Mt. Hood NF

On October 11, Gregory M. Filip, Pathologist, visited the Zigzag Ranger District, Mt. Hood National Forest. Purpose of the visit was to examine tree mortality caused by root disease in the Summerhome area along the Zigzag River. He was accompanied by Tom Cox, District Silviculturist; Kurt Kessler, Small Sales Administration; and Dave Hankin, Forest Technician.

Two areas were examined. The first was located within the Summerhome tract but with no buildings within 100 feet. The second was an area with summer homes on the site. Both areas contained old-growth Douglas-fir with western hemlock and western redcedar. Some white pine, lodgepole pine, and bigleaf maple were also present. Stands appeared moderately stocked.

Examination of dead and dying trees revealed the presence of *Phellinus weirii*, cause of laminated root rot a destructive root disease, especially of Douglas-fir. Several infection centers consisting of a few dead trees and several dying trees were observed. Centers appeared to be coalescing but several "healthy appearing" trees are left.

The occurrence of root disease in forest recreation areas is of serious concern. Dead and visibly dying trees should obviously be hazardous to people, vehicles, and dwellings, but "healthy appearing" trees can have serious root damage caused by root disease without the appearance of above ground symptoms. The large diameter and height of affected trees in the Summerhome area magnifies the hazard.

Two courses of action are suggested before a decisionmaking process is begun. It would be to the advantage of the District to participate

in a seminar concerning recognition and reduction of hazard trees in forest recreation areas. Greg has volunteered to conduct such a session on Wednesday, November 14. A suggested agenda is included. Such a seminar will acquaint District personnel with the philosophy and science of hazard tree management in this Region.

A second course of action would be to intensively evaluate which sites are infected and the degree to which each is infected. The proportion and distribution of resistant tree species can also be determined from this evaluation. Forest Insect and Disease Management can assist in training crews to recognize infected trees and help design and conduct the evaluation.

After the seminar and site evaluation have been completed, the following alternatives can be considered concerning future site management:

1. Do nothing - root disease will continue to spread to healthy trees and intensify in trees already infected. Infected trees may windthrow while still alive. Douglas-fir will be most seriously affected. Hemlock is less affected. Pines, cedars, and hardwoods are resistant.

2. Salvage all dead and dying trees - root disease will continue to spread perhaps at a slightly faster rate unless stumps are removed also. Opening of the stand may lead to additional windthrow of infected trees.

3. Removal of all Douglas-fir within a 50-foot zone of all visibly infected trees - this will remove the majority of infected trees on the site. However, some remaining infected trees may windthrow if on the edges or within openings. Root disease will spread to Douglas-fir that regenerates in new openings. Openings should be planted to cedar, pine, hardwoods, or, less preferably, hemlock.

4. Removal of all Douglas-fir within a 50-foot zone with additional removal of stumps - this will remove most of the infected trees plus eliminate food bases from which the fungus infects other trees. Douglas-fir can be planted safely where infected stumps have been removed. Some windthrow may occur in residuals.

The alternative or combination of alternatives used will require a balance between the degree of hazard reduction and retention of aesthetics. Such a decision will require input from several sources besides pathologists including silviculturists, recreation specialists, lawyers, and especially, the summer home owners.

Beyond what has been discussed, FIDM pathologists will assist the District in any manner they feel is necessary.

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